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UNUSUAL PRESENTATION OF HYDATID CYST: A CASE REPORT

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ABSTRACT

Hydatid cyst or Echinococcosis is a zoonotic parasitic disease caused by tapeworm that occurs primarily in sheep grazing areas, but it is common worldwide because dog is a definitive host. It has serious impact on health and economy in the endemic countries. Hydatid disease is most frequently caused by E. granulosus and commonly affected organs are liver and lung. It is a chronic disease and cyst can be localized in different organs. A high index of suspicion is required to diagnose it in the unusual region and non endemic areas. Incidence of hydatid cyst in head and neck region is extremely rare. This case report emphasizes that hydatid cyst can be kept as differential diagnosis of benign swelling in head and neck region.

KEYWORDS: Hydatid Cyst, Neck Mass, Unusual Presentation, Echinococcus

INTRODUCTION

Hydatid cyst is most frequently caused by E. granulosus [1]. The disease is endemic in many Mediterranean countries, the Middle East and Far East, South America, South and East Africa. Liver and lungs are most commonly involved organs, liver being involved in two third of the patients. The involvement of all the other organs including brain, heart, kidney, bone, skeletal muscle, breast, thyroid gland comprise only about 10 % and are listed under unusual localization classification [2, 3]. Involvement of head and neck region by Hydatid cyst is very rare, and only few cases have been reported till date in literature [4].

Case Report

A 40- year female presented in surgical outdoor with complaints of swelling at left side of neck for 2 years. It was insidious in onset, slowly progressive and not associated with fever or history of trauma. Patient's personal history revealed the close proximity with cow and dog.

On local examination of left posterior triangle of neck, a swelling of size 6x5 cm present in the posterior triangle of neck, soft in consistency, nontender, with no local inflammatory response or spasm of cervical muscles.

Chest radiograph, USG abdomen, blood & urine analysis were normal except slight increase in eosinophilic count.

Magnetic resonance imaging (MRI) showed a cyst in the muscular plane of upper posterior cervical region, exhibiting low signal on T1W1 with high signal on T2W1 measuring 6.5x6.1 x3.1 cm in size (volume 64 ml) (Figure 1). It has a signal void wall on both T1W1 and T2W1. The cystic lesion was round and well delineated by a thin wall that showed no enhancement after injection of contrast.

The cyst was removed surgically by pericystectomy. Intra operatively there was a 6x5 cm cyst present below the trapezius muscle, multiple variable sized daughter cysts present (Figure 2). There was no spillage of cyst fluid into the surrounding areas and her post operative course was uneventful. Patient was discharged with 1month course of Albendazole 400 mg twice daily.

Histopathological examination demonstrated a germinal layer, lamellated ectocyst with fibrous outer layer. Marked foreign body type giant cell reaction was also seen confirming hydatid cyst.

DISCUSSIONS

Echinococcus granulosus is a parasite of dogs, wolves, foxes and jackals. Human are accidentally affected by contamination of food by the eggs found in feces excreted by the animals. After the development of the embryo, various organs are infested by its migration through intestinal mucosa. Hydatid cysts located in the head and neck region are extremely rare, and an isolated infestation with no history of cystic rupture elsewhere in the circulation, as seen in our case, is particularly unusual.

Patients with echinococcus infestation must undergo thorough systemic investigations because 20-30% have multiorgan involvement. Hydatid cysts in neck, in the absence of disease in lung and liver, may be due to systemic dissemination through lymphatic route, is a strong possibility in case of unusual presentation sites. The majority of hydatid cysts are asymptomatic and symptom depend on location, size and pressure caused by enlarging cyst [5, 6]

The diagnosis of *Echinococcus* infection mainly depends on the clinical history of the patient, diagnostic radiological findings and serologic tests. ELISA, Casoni skin tests, latex agglutination, immune electrophoresis and direct hemagglutination are serological methods, used for the diagnosis of hydatid disease. An increase in titer indicates recurrence of disease and a decrease in titer indicates resolution [7, 8].

For the evaluation of mass lesions in the cervical region, fine-needle aspiration cytology (FNAC) is beneficial however there is potential threat to precipitate acute anaphylaxis and spread of daughter cysts [6].

Therapy with nontoxic scolicidal agents or combination chemotherapy with mebendazole is of therapeutic value in the treatment of patients with recurrence or a high risk of contamination [6].

Albendazole is suggested to be given post operatively for 1 month according to WHO guideline. We treated the present case with albendazole 400 mg twice daily for 1 months post operatively.

The diagnosis of hydatid cyst is confirmed by histology [4]. Our case demonstrates histopathologically, scolices, an acellular, thick, lamellar cyst wall. The surrounding host reaction, which is composed of the inflammatory fibrous tissue, forms a dense pseudocapsule around the cyst confirms the diagnosis of hydatid cyst.

CONCLUSIONS

Hydatid cyst should be kept as differential diagnosis of cervical masses especially in countries where Echinococcus infestation is endemic. Fine needle aspiration cytology is a good tool for diagnosis but risk of anaphylaxis is a major concern.

During surgical removal of cysts great care must be taken to avoid spilling of the cystic contents. Histopathological examination of surgical specimen and patient follow up seems critical in all cases in order to offer accurate diagnosis and definitive treatment and prevent recurrence.

REFERENCES

1. Georgopoulos S, Korres S, Riga M, Kouvidou CH, Balatsouran D, Ferekidis E. Hydatid cyst in the duct of the submandibular gland. Int J Oral Maxillofac Surg 2007; 36:177-179.
2. Dagtekin A, Koseoglu A, Kara E, Karabag H, Avci E, Torun F, Bagdatoglu C. Unusual location of hydatid cysts in pediatric patients. Pediatr Neurosurg 2009; 45(5): 379-83.
3. Engin G, Acunaş B, Rozanes I, Acunaş G. Hydatid disease with unusual localization. Eur Radiology 2000; 10: 1904-1912.
4. Katilmis H, Ozturkcan S, Ozdemir I, Adadan Guvenc I, Ozturan S: **Primary hydatid cyst of the neck.** *Am J Otolaryngol* 2007, **28**:205–207.
5. Michail OP, Georgiou C, Michail PO, Felekouras E, Karavokyros I, Marinos G, Giannopoulos A, Griniatsos J. Disappearance of recurrent intra-abdominal extrahepatic hydatid cyst following oral albendazole administration. West Indian Med J 2007; 56(4):16-21.
6. Akal M, Kera M. Primary hydatid cyst of the posterior cervical triangle. J Laryngol Otol 2002; 116:153-155.
7. Aletras H, Symbas N: **Hydatid disease of the lung**. In *General Thoracic Surgery*. 5th edition. Edited by Shields TW, LoCicero J, Ponn RB. Philadelphia: Lippincott Williams and Wilkins; 2000:1113–1122.
8. Guney O, Ozturk K, Kocaogullar Y, Eser O, Acar O: **Submandibullar and intracranial hydatid cyst in an adolescent.** *Laryngoscope* 2002, **112**:1857–1860.

APPENDICES

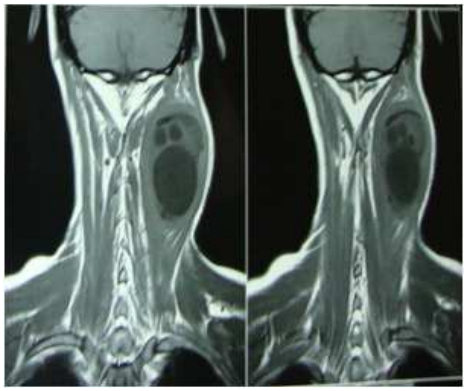

Figure 1: MRI Appearance of the Cyst

Figure 2: Per Operative Appearance of the Cyst